STYLES TO SUIT ALL.

Woman Now May Please Her Own Sweet Will in Dress.

INDULGENT DAME FASHION.

The Variety of Styles, Materials, and Colors Greater Than Ever.

Bints of Fashions for the Automs-Felt Hats Beginning to Show Themselves-Latest Ideas in Conts-Nautical Jewelry Now the Rage in London-A Charming Plahing Costume - Devices in Tatlor-made Gowns-Costumes for Little Boys and Girls-New Things in Trimmings-The Toques Perennial in Their Popularity.

Never in all the past could woman follow her own sweet will in dress as at the present time. and never were women more tastefully and becomingly costumed. A dowdy or ill-fitting gown is now the exception. With the infinite number of colors and their beauty and the exquisite textures now offered, if a woman has a little artistic taste and perception of her best points, there is really no excuse for her appearance being any-thing short of a dream. Mother Eve taught her daughters many little tricks. One of them each woman surely must have by heart, that of knowing her own style, and what a happy one it is, if only carried out! She must not take exactly what her neighbor or her sister looks lovely in, but must modify or add to, so as to fit her own particular style. She should adapt the fashions



n herself, instead of herself to the fashion naking them part of her individual style.

The Dame has been particularly kind to women in allowing them so much leeway in gowns, hats, colffures, and wraps. Never were there so many shapes, colors, and textures to help a woman in carrying out her own ideas, and every woman should be instinctively drawn or repelled by a shape or tint. Each woman has in herself a keynote for dress if she will only listen to it. Of course, the clever modiste can make a woman and a very fine one, too, and Paris and London must give assistance with their advanced ideas of change. But mother wit must be at the fore to bring out one's good points and conningly cover up the poor ones.

Just now the wise ones seem to be all at sea

about offering new styles to select from. The season is so decidedly on the ebb that women must be content to freshen up their laces and lawns with the addition of fresh colored slips of silk and ribbons, adding all their pretty graces and sighing for something new. One little whisper came from Félix that the autumn would waisper came from Félix that the autumn would usher in capes made of suède. The dainty coloring and soft dead finish of the leather will no doubt make them popular. A soft peachy shade, for instance, lined with silk of the same or a very light contrasting color, would, to say the very least, be delicious. The softness of the texture tinparts unthing but grace to its folds. Felt hats are already beginning to show themseives for early fall wear. Most of them have sittened crowns, and the brims rather broader than formerly. The soft brown and tan shades are much the pretities. One of dark gray, bound with a very narrow edge of black velvet, had a band about the crown terminating in a hige bow at the left side, making a background for a white plumaged bird. A tabac brown hat was trimmed with black velvet roses and a black jetted bird on each side. Quills are very made itsed. The most beautiful are the argus pheasant, which are exquisitely marked. Many of the serge dresses are being trimmed with perforated cloth, cut out in rich patterns like lace, which is applied to collars, cuffs, and revers of dresses. The tailor-made gowns are still as fashionable as ever, but are smartened by very much by long waistcoats of brocade, with chief flowers on silk, which releve them of their former severe pianness.

their former severe plainness. The toques, which seem almost perennial in of their former severe planness.

The toques, which seem almost perennial in their popularity, are very pretty and becoming. One was of tabac straw contrasted with black motic ribbon, terminating behind in two upstanding ends, the garniture being tufts of signettes of black. A stylish French model was of coarse black straw. A square buckle of let ever a knot of mise motic ribbon held in place four bows of black lace, while at the back the inserted maize feathers were fastened to the brin by tiny rosettes.

The new coaching coat has no seam at the back, but an added piece down the centre with lapped seams. It has a velvet coilfr and velvet ciffs quite long and opened up each side. It is double breasted and has hap pockets. All the driving coats are cut on the principle of the men's coats, with more fulness in the back.

Naufficial jewelry is just now the rage in London, and how many wedding bells will ring in the future from the results of the fair remains



on the outside of the turned-up skirt holds a handkerchief. The waistle made like a Norfolk jacket and is turned away very slightly from the throat, revealing a white linen collar and dark red tie. The cuffs and collar facings are of leather. The Tam o' Shanter cap and leggings are of the soft leather also.

A very pretty gown for a young girl is composed of a roseate mauve crépon and foulard of a much darker shade. The simulated underskirt is of the foulard, pleated full and fine to the lining skirt. The somewhat shorter upper skirt is draped at the right, forming one box pleat. The jacket bodice is of crépon with pleated berthas of foulard, over which are revers of Richellen lace. The jacket is fastened down by two large buttons on either side. There are large giot sleeves. The sailor's hat is elaborately trimmed with ribbon of the two shades of the dress.



An extremely becoming tailor gown, especially adapted for a figure gently galuing in embonpoint, is out in redingute form. One was made of canvas woven amber woollen, with the three narrow breadths in front, the aide breadths being cut with the bodice. The seams of the skirt were outlined with silk piping cord, the silk matching the dress in color. The narrow bodice fronts were finished with pointed revers and fastened at the waist with gold buttons, the revers forming a turn-down collar behind. Both were lined with silk. The body breadths were plated into a waistband, and finished in a plain divided swallowtail basque. The balloon sleeves had stiff gauntlets to the elbows, and were adorned with gold buttons. The round hat of fine white rice straw was trimmed with rosettes of amber satin ribbon and tufts of tulle.



A chic costume that makes a very smart mid-season tollet is composed of shepherd's plaid alk made over a gown of peau de sole covered with black silk guipure. The waist is cut pina-fore fashion and fastened over each shoulder with a band and rosettes of the plaid. The overskirt is cut plainly and looped quite high on each hip, being lined with black silk, that peeps out under the folds of the draping.



An elegant reception toilet has a perfectly plain skirt of white moiré silk, showered with bouquets of colored flowers. The jacket bodice, fitted and fastened closely at the waist, is cut of plain white moiré, and the very large revers are faced with almond green moiré. Two white buttons fasten the revers at the waist, and two green, to match the facings, hold them



with two long ends, fastened at the waist with a small resette of almond green moire ribbon. The whole front of the bodice is filled in with white slik muslin, and there is a full bow at the left side of the neck. The huge gigot sleeves are cut very long coming slightly down over the hand. The Empire bonnet is of yellow straw, trimmed with almond green and white moire ribbon, in very high standing bows.

Every mother of a boy knows what difficulties await her when her darling has arrived at



For dress occasions a suit may be made of black valvet with silk stockings of black, and the blouse turned away in front showing a fine lines laws shirt with a turnover lines collar and cuffs.

Little girls fare much better than boys. With frills, laces feathers, and ribbons with styles and shapes so numerous and quaint, the little ones may be made to look as if they had just stepped out of a dainty water color. One little



maiden was attired in an Empire frock of beigecolored bengaline trimmed with gulpure. The
skirt was held up with shoulder straps of the
bengaline and rosettes of black moire ribbon.
The yoke was of gulpure with back and front
exactly alike.

It is an exploded idea that white muslin gowns
need no artistic touch to perfect them. In the
accompanying dainty model for a girl of twelve,
the three ruffles have insertions of valenciennes
lace between, and the full double bratelle ruffles
are formed to points at the ends. The yoke is
shirred to the throat. The puff sleeves are
gathered to form a small frill at the cibow. A
soft white ribbon tied round the throat finishes
this pretty gown, and it may be all white or
worn over a silk slip of any desired shade.



For a little girl of ten here is a dainty gown of white batiste, with touches of bright red. The garment is cut all in one piece and full box plaited front and body, the top of the box plaits forming a ruffle about the square neck. Large purfed sleeves reach to the elbow. The shoulder straps of red ribbon match the spots in the dress and end in rosettes. There is a garniture of the ribbon about the waist.

THE SECRET OF EARLY RISING. It Is Largely a Matter of Habit, According to Well-known Men.

A question that puzzles many business men who lead a regular life is how other men, whose occupations and inclinations keep them awake late at night, are able to be up and about in the morning at almost the same hour as ordinary persons. This refers more especi-ally to politicians, actors, and newspaper men. They may be seen about town long after the average citizen is abed, but somehow they are stirring again at just the same hour as the man who lives by system. Of course, many of them have to resort to ex-traordinary measures to get up, but the chief ecret for regular rising seems to be in acquiring a habit of rising at a certain hour every

norning and living up to it. Henry Irving, the actor, was accustomed while in this country to remain awake for several hours after the evening's performance, and yet he was always astir by 9 o'clock in the morning and out for his walk. He told a friend that he got used to awaking at a regular hour in the morning when a youth and the habit clung to him even when he had to be up o'nights.

Henry Clews, the banker, cannot be classed among those who are up late at night, but he is known as an early riser, and is at his office every morning at 9 o'clock.

"I cannot remember when I had to be called have got out of bed at 7 o'clock almost to the minute, without a call, and I believe it is all a matter of system. You see, the human being is like a watch-it must be wound up and will run for a certain time, when there must be a new force to start it again. Sleep is the relief force of the human being, and, in order to run right, this force must be distributed as regularly as the watch is wound. I find that a man can waxe himself at any hour without assistance, if he will only accustom himself to it."

Superintendent Byrnes is another believer in systematic awakening. Although he is generally considered cool and impassive, he is really of a highly nervous temperament. He has naturally been kept up late at night on many occasions by his peculiar calling; but no matter how late he retires he is awake at a certain hour.

"My life as a policeman has accustomed me regular rising, although all policemen are generally called when it is time for them to begin their duty," he said when asked the secret of his early rising. "If you will ask the doormen who call the policemen at regular hours how the men get up you will find that, although they seem to be in the midst of a sound sleep, they will awaken at the scheduled hours in nine

they seem to be in the midst of a sound sleep, they will awaken at the scheduled hours in nine cases out of ten."

The build of Inspector Williams might suggest that he is a heavy sleeperand one difficult to awaken, but the big inspector says that he has no trouble in arising and never has to be called. "Just to illustrate how a habit will fix itself on a man, let me tell you this incident," he said. "I have a telephone in the rear of my house, just forty-five feet from my bed, and I have to walk through three rooms to reach if. Last Sunday afternoon I fell asleep on a couch right under the telephone in the rear room. A fire broke out down town and the telephone bell rang. Well, being accustomed to getting up when it rang I jumped up and, although it was ringing over my head. I walked right through to the front room before I realized that I was a victim of habit. It only requires a little practice to accustom yourself to early rising."

"I used to have considerable difficulty in getting up at a regular hour in the morning, especially when my working hours were changed from night to day," said Supervisor W. J. K. Kenny of the City Record, "but I finally hit on a acheme that never falls to make me wide awake. I still have to be called, but once called I can always get up. The morning newspapers are what wake me. When I am called the newspapers are thrown into my bed and I cannot resist them. I am soon up and have no inclimation to turn over foran additional snooze."

"The luxury of a cold bath is, I think, the incentive that makes me get up at a regular hour every morning," said Corporation Council William H. Clark. "I simply begin to dream of one about the hour for arising and have to get up and and get it."

"I find the difficulty is not in getting up in the morning, but in getting to bed at night." said

about the hour for arising and have to get up and get it."

"I find the difficulty is not in getting up in the morning, but in getting to bed at night," said Walter Jones, the comedian of "1462" fame.

"It seems to me that there ought to be no trouble about a man getting up in the morning in this city, with the number of organ grinders that are loose. If you know of anybody that has difficulty in awakening, and pays no heed to alarm clocks, or the like, I can refer them to a couple of organ grinders who are guaranteed to wake an elephant out of a sound sleep and make him stick his feet in his ears and dance."

Mayor Gilroy said: "I have no difficulty about rising in the morning. I get up usually at 7 o'clock while in the city and haif an hour earlier when in the country. Generally I impress upon my mind the hour at which I should get up, and awake at that time. If I have any business that is important and requires early rising, I find myself awake long before the hour at which I should get up, and appear to the country.

BIAS VELUTINA

A Marvellous Showing.

The U.S. Government, through the Agricultural Department, has been investigating the baking powders for the purpose of informing the public which was the purest, most economical and wholesome.

The published report shows the Royal Baking Powder to be a pure, healthful preparation, absolutely free from alum or any adulterant, and that it is greatly stronger in leavening power than any other brand.

Consumers should not let this valuable information, official and unprejudiced, go unheeded.

ROYAL BAKING POWDER CO., 106 WALL ST., NEW-YORK.

MONTICELLO, N. Y., Aug. 17.-The town of Liberty, this county, claims the champion rattlesnake hunter in the person of 16-year-old Mary Burton. Early in the season she killed a raitlesnake in her inther's yard and cut off the rattles. Since then she has developed a craze for collecting the rattles of these snakes, and apends her time in hunting the venomous reptiles. Up to date sne has killed twenty-eight rattlesmakes, and from them has obtained

rattlessakes, and from them has obtained twenty perfectly matched sets of ruttles. Each set has nine rattles or segments. The other eight-sets are old ones, ranging from four to ten rattles in a set.

The worm of this part of the State seem to have saxed an aniwang courage in dealing with smakes this season. A report from Hancoux says that Mrs. Frank Tower of that pince was on her way home after dark the other evening when she learn a rattlessake sound its rattles in the weeds at the roadside. She hurried home, said nothing to any one, got a lantern and a club, and returned to the spot where she had heard the rattler. It was tiere sith, and sprang its rattles abson as Mrs. Tower approached. She turned her light on it, saw it lying colled ready to strike, and smassied its head with the club. The snake was an immunes fellow, measuring over five feet, but it carried only nine rattles.

A young girl named Henrietta Quick, across the belaware in Lackawaxen, Pa., heard a noise among her chickens. She went out and saw a rattlessake manguaring to capture one, She cut its head off with a hoe. This one had thirteen rattles.

A CONTORTIONIST'S GREAT SCHEME. It Was a Money-Making Game Until Hyde and Smith Came Along,

In a down-town café, where theatrical men sometimes gather, half a dozen old-timers sat one afternoon last week. They had talked about everything when one of them suddenly asked: "Say, boys, did I ever tell you about that came that Jim Hyde and Ike Smith put up on a Span-ish contortionist about ten year ago?" The others had not heard the story, so the

speaker resumed: "It was away back in '84. The theatrical season had been very dull. Many managers were on their uppers, and as for the ticket speculators, they couldn't make a living. Hyde and Smith were speculators. Both had families depending upon them for support, and for months they to make money. They finally hit it, but they had to lay low for some time afterward, as the man they made a victim of threatened to shoot

"In 1884 the Arion saloon on lower Broadway was quite a resort for sporting men. One night a wiry little Spaniard walked into the saloon and got in conversation with a couple of sport-

ing men.
""Would either of you gentlemen like to make a little money? he asked. Both remarked that they were not at all averse to increasing their capital, and then the little Spaniard unfolded his scheme. He was a professional contortionist, he said, and, in addition to being able to twist himself into all sorts of shapes, he was also able to wriggle himself out of any rope with which he might be tied. His scheme was do it. The men fell right into the scheme.

"The next night the Spaniard went to the saloon again and announced that he would bet \$25 that no ten men in the place could tie him so securely that he could not free himself in two minutes. Jack Johnson, a gambler, took him up, and the two sports succeeded in placing up, and the two sports succeeded in placing about \$500 in bets. The Spaniard let himself be tied up with a rope, and was then placed in a big potato bag. The mouth of the bag was tied securely, and, with watches in hand, the crowd watched the bag. There were one or two wriggles and then the Spaniard shoutedto be let out. The bag was opened and out stepped the Spaniard carrying the rope in his hand.

"The scheme proved a veritable mint for the two men and the Spaniard. Every night they visited a different saloon and went through the same game.

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"Jim Hyde and his friend Smith heard of the Spaniard, and devised a little scheme to beat the man at his own game and diminish the bank rolls of his backers. Both Hyde and Smith were broke, and as it needed, money to put their scheme through, they went to an oid physicial who was a sporting me. Hyde laid the scheme before him, and finally succeeded in getting something like \$1,000 from him. Smith borrowed several hundred dollars from a friend, and then the two went around to the Arion and waited for the Spaniard and his friends to show up. For three nights they waited, and on the fourth night they were rewarded. The Spaniard came sauntering in and made his usual offer. He repeated it several times before he got any answer, and then Hyde jumped up and salif.

"Do you mean to tell me that you en unit yourself in two minutes if I tie you up?" Yes, 'replied the little fellow.

"Betcha can't,' said Hyde; 'betcher wine for the house that you can't."

"You wail Hyde, and then the fun began. Smith began bawling out that he didn't believe it could be done, and then the Spaniard's back-seys offered to bet him money that it could. Hyde bet more and more, and finally Smith and Hyde had about \$1,000 wagered on the result. Those who had seen the Spaniard belooked up the sale sumbody got a vope and somebody else procured a big potato bag. Then he ashod up, and Hyde and Smith began to the bank and sumbody else procured a big potato bag. Then he ashod up, and Hyde and Smith began to the bilm. They tled his hands tightly together behind his back, and then wound the rope securely around his body. His feet were then tted and more rope wound around his legs. It looked impossible for the man to escape, but he never once stopped smilling, and his backers linksted that the crowd stand back, and when everybedy w

GIRL WHO HUNTS RATTLERS. A DEARTH OF POPULIE SONGS. She Is 16 Years Old and Rus Killed 28 No New Air Seems to Have Caught the

Public's Fancy This Summer The season is well nigh over, and there is no song this summer which can be said to have been the rage in the fashion of "After the Bail," for instance. That popular melody went pace that kills, and is as dead now as the Del-phic hymn that was lately resurrected in Greece. it has had no successor this year, and there has been nothing to equal it in popularity. Prof ably "Somebody Loves Me" is the song most fre-quently heard in the ways which prove the

questly heard in the ways which prove the popularity of such massic. The Hamardans on the roof garden have selzed on it with an alacriz which proves the patients of activiting new in this life. It is ordinary, and supplied with an introduction which is singuicessly taken from Faure's "Les Rameaux". Its vogue is indicative of the situation.

"Sweet Marie" would have move been heard so much if their were mything elector barel arguin to play or small boys to white it. The best of frome out in that haveness of a decide age, "Haby Mine." On one of the coof gardens hast week a song known five years ago as. The west of the man was singing it to near words, and later in the evening it was longer under the different names. One man was singing it to near words, and later in the evening it was income as in frish some.

The soubreites are still relling about "The Lady with the Spotless life matation," and Varron's old song, "Les Gord's Tunicipeux," is still vigorous. Probably the fact that there have been no new Harrigan plays of late is in a measure responsible for the deartin of popular songs, which last summer and the year before were unusually abundant.

FLYING TRIPS TO TOWN.

For Women They Form Half the Fun of Going Into the Country in Summer, For women one half the fun of going into the country for the summer consists in coming to town for the day. Not that there is anything very important to come for, in spite of frequent

references to scribbled memoranda; but men are such failures as shoppers that it is neither safe nor pleasant to intrust such business to them. Even the dearest husband, who thinks it no hardship to race up to Harlem for a dog, or ransack the city for a special golf outfit, turns sulky the moment he is asked to match a bit of dimity or fetch down half a dozen pairs of stays on trial. He never sees when he can find the time, invariably makes a mess of the whole

stays on trial. He never sees when he can find the time, invariably makes a mess of the whole business, and then winds up by losing his temper when mistakes are pointed out to him.

But if husbands only knew it, they would actually save money by being a little more thoughtful and amisble. Here is a story to prove it. The heroine is a lady in West Chester, whose acute and neglected sufferings for a white chiffon veil and a pair of patent tie classe, brought about an expensive matrimonial jar in her family. The aggregate cost of the articles in question was just seventy cents, and for ten days she honestly tried to persuade her husband to get them for her.

On three occasions his excuse was lack of time; twice he declared that he forgot all about them; once he left the package on his desk, and another evening, when it chanced to be folded in a newspaper he had finished reading, it was carelessly tossed out of the car window. After that he began all over again, but without any better success, and at the end of the following week his wife stopped speaking to him.

The next day, like a plucky woman, she came into town to do her own shopping, the result of which pointed a moral her husband is not likely to forget very soon. It made the difference between 70 cents and \$120 to him. Four hours use of a hansom, luncheon at Delmonico's with two women chims from Hempstead, a lovely \$20 hat for cost on account of removal, a freek that was being given away at a marked down

tween 70 cents and \$120 to him. Four hours use of a hanson, luncheon at Delimonico's with two women chuins from Hempstead, a lovely \$20 hat for cost on account of removal, a frock that was being given away at a marked down sale, and some ridiculously cheap Dresden figurines footed up the difference. The man says his memory has grown so keen and sensitive that he can recall the lace pattern on his own christening robe.

Nor do these amateur country women find it bad fun to make the trip back and forth just for amusement. They know most of the commuters, and the men who stop in town all summer are desperately civil in their pleasure at seeing one of their own kind in the city once more. Such a woman from the country is always a picture of crisp, cool elegance. English women never recover from their surprise at the way an American can travel in the stuffest train all day and look as smooth as silk at the end of the journey. For these brief trips back and forth during August she usually wears a bodice of clear pale like lawn spotted with white polka dots. It's a French shirt, just from Paris, and quite different, of course, from augusting seen in the shops. In an inch wide band down the front, in long wedge-shaped stipes on the shoulders, and forming exaggeratedly high and deep rolling collars and cuffs, is the stiffest of white playe. The chie look it gives is remarkable, and where the neckband comes together there is a crimpled Jabot of the like lawn. Her flaring skirt is black, of richly writikled slik crépon, her ties are of petent leather, her gloves white, hat a rough saffron straw dressed with black violets and aigrettes, while over it is drawn the long-desired white chiffon veil. She is tidy, cool, and correct, and remains so in spite of hours of unremitting toil over the counters.

CHEAP LUNCH AND MENDICANCY

"Every time a philanthropic man erects cheap lunch stand in this city he helps to en-courage one of the worst nuisances of the metropolis," said a well-known city official the other day. "I don't mean to cry out against charity," he resumed, "for it is unquestionably a great

thing, and furnishing the poor and needy with food and drink at cost prices is, to my mind, the greatest of charities; but every man must have noticed how the beggars and mendicants fock around these lunch stands as soon as they are erected and use them as a medium through which to obtain money from the charitably disposed. If the money obtained in this manner was actually spent at the stands it would be all right, but in nine cases out of ten it is not. The mendicant quietly pockets it, and then works the hungry game on the next man that comes along. Eventually the money finds its way into the bocket of none salons keeper.

"I first noticed this practice when the is. Andrew's coffee and lunch stands were placed around the city. It was absolutely impossible for a man to get within half a block of one of these stands without being selicited for aims a half dozen times. Impudent, boys as well as dissolute men would approach pedestrians and beg for two cents with which to get a cup of coffee and a bus. If they didn't get it they would become insulting, and finally it became such an intolerable nuisance that many business men would go a block out of their way in order to enough these follows. The coffee stands were certainly a boon to the beggars. Many persons who would, under ordinary circumstances, diaregard a plea for assistance tromaton men, gave over the two pennies immediately upon the caffee and bun argument.

"The other day I was walking through City Hall Park, when I was accounted by a man who wanted a penny to get a giass of milk with. I refused him the money, and he made an insulting remark, which resulted in his being arrested, for I immediately upon the caffee and bun argument.

"The other day I was walking through City Hall Park, when I was accounted by a man who wanted a penny to get a giass of milk with. I refused him the money, and he made an insulting remark, which resulted in his being arrested, for I immediately summonded a policeman, who took him in. Since that time I have been accounted him the money and he made an insulting remark. Which resulted in this way. This increase of mendic the greatest of charities; but every man must have noticed how the beggars and mendicants

Instrument is based upon the well-known acoustic principle that, if two organ pipes of the same pitch are sounded simultaneously by

It is thought that the recently contrived ap-

same pitch are sounded simultaneously by means of blowers, fed by pure air, a simple sound is heard, but if there be forced through one of these pipes pure air, while the other is thrown into vibrations by means of a mixture of alr and gas, the sound of the latter pipe is correspondingly modified, and consequently, when the two pipes are sounded simultaneously, a certain number of interference beats will be heard, depending upon the quantity of gas contained in the air with with which the pine is fed. The formensphone, the apparatus by in ans of which this operation is performed, consists simply of two blowers and two pipes precisely alike. One of the blowers and its appropriate pipe is inclosed to an airtight box containing pure air, and the scar pipe is fed by a mixture of air and gas. The whole proceeding involves only a very brief time, perhaps a few seconds. in an address before the British Association

Mr. Bramwell asserts that neither bright iron nor steel will rust in pure water of pure air. The presence of earbonic acid or some similar agent seems necessary, although the final prod-uct may be destitute of carbon; and even when uct may be destitute of carbon; and even when oxygen, measture, and carbonic acid are all teresent, rusting will not take place unless the mosture condenses on the surface of the metal. When custing does take place under ordinary circumstances, the first stage appears to be the formation of feerous carbonate, this carbonate ocing next dissolved in carbonate, this carbonate ocing next dissolved in carbonate acid water to form the carbonate of air and misture to form hydrated ferric oxide, magnetic oxide being found as an intermediate product. In regard to the progress of corrosion, a polithed har will resist oxidation for a comparatively long time, even under somewhat uninvortable conditions, but once the rust has commenced only a short time is required for it to ever the whole har. One reason assumed for this is the fact that the rust is electro-positive to the from and it is partly attributable to the huma product, the hydrated ferric oxide, being formed only at the end of several intermediate stages of the oxidation, and also to its hydrasconic properties, which favor the absorption of the mosture from the air. In certain situations other acids besides carbonic may take part in the corrosion of from

The real danger involved in the proposed inreased speed of railway trains say ninety of sae hundred miles an hour-is not, according to kuldows, in incidental risks, but, rather, in the curves of the existing lines, which render any such speed impossible, unless the weight of the cigines and trains be also increased far beyond what the bridges and permanent way would bear—that is, at the first sharp curve, the one interest of the state of the sail. The necessary relation of these curves to speed it accurately known, and this it is, and not the lack of power, or novel damers from wind pressure or beiter explosions, which sets the limit to mestern train speed. Kublows further remarks that, as the force tending to throw off the line a train running at the speed of 150 miles an hour would be about six and a half times greater than that which a steam expressival resists at a curve when running at sixty-two miles an hour, it is plain that the present lines could not be used for the "lightning express," even though the electro-motor were substituted for the steam engine; the lines must not only be stronger, but straighter than would be possible by any modifications of their bresent forms. corines and trains be also increased far beyond

The value of heating surface in the fire-box tules and smoke box of a locomotive may, according to a recent writer, be considered to diminish very nearly proportionately as it is removed from the front end, where the fire is situated, to the smoke box and chimney. rigated fire boxes are used on the marine type of boilers, mainly to allow of expansion and contraction, but it is stated that an English inventor now proposes to build rectangular locomotive fire boxes, either of copper or of mild steel, and to increase the heating surface without diminishing the grate area by means of corrugations—these to be made quite deep across the crown sheet and down the side sheets, the flanges being in a direct line across the box, so that there shall be no weak point where the corrugations terminate. By the adoption of this arrangement the strain is on a direct line of rivets, which join the crown sheet to the side sheets, an increase in the water capacity of the boiler and an enlarged heating surface being secured; the side sheets are corrugated in wedge shape with the large end near to the crown sheet and reduced to nothing at or near the grate bars, the end accomplished by this means being that of an increased heating surface without loss of grate area. rugated fire boxes are used on the marine type

According to the reports made from different quarters the paper tires for bicycles as made at present are acknowledged to possess some de-cided advantages as compared with the rubber article, proving fully as substantial and elastic, ingredients being put into the paper stock to inarticle, proving fully as substantial and elastic, ingredients being put into the paper stock to insure the requisite elasticity, durability, and firmness. The method of drawing out a paper tube, whether it be the size needed to circle around a bicycle wheel or something smaller, remarks a writer on the subject, is an old one and well known to manufacturers of paper. In this new application the uniting of the two ends together is effected by a new and simple method, one end being enlarged and shaved off on the interior for several inches, the other end is shaved off on its exterior and put into the other half, and a special adhering glutineous substance is used in making the joint tight to the greatest possible degree; hair is employed in place of interior linings and air, and is forced into the hollow of the tube before the union is made, a special instrument being used, so that the packing is uniform. While the life of a rubber tire is two seasons, as many as five are claimed for those made of paper. It is argued, too, that thousands of bicycles which are now supplied with hard or cushioned tires because of the expense of pneumatic, and which would be fitted with pneumatics if a cheap and durable one were available, will find the paper tire to fill the need.

Something of an industry has been established

Something of an industry has been established in Italy in the production of fuel bricks of crude petroleum, the size and form being similar to the coal briquettes extensively used in France and Germany. The mixture is made in the proportion of one liter of petroleum, 10 per cent, of resin, 130 grammes of powdered soap, and 333 grammes of caustic soda. The misture is heated and stirred at the same time. Solidification begins in about ten minutes, and the operation is then watched with special care. If there is a tendency to remain liquid, a little more soda is added, the mixture being stirred continuously until the mass becomes nearly solid. After this, the thin pasts is poured into the moulds, these being placed for ten or fifteen minutes in a drying stove, the briquettes are then cooled, and are ready for use in a few hours. As a matter of economy, as well as to insure greater solidity, the addition of 20 per cent, of wood sawdust and 20 per cent, of chay or sand is practised in some cases. The advantages of these for marine use, as compared with coal, are the absence of smoke and a large reduction in the bulk of fuel which must be carried. portion of one liter of petroleum, 10 per cent, of

MIRACLES AT BEAUPRE.

Malut Anne. QUEBEC, Aug. 13.-The clergy in charge of the miracle-working shrine of La Bonne Ste. Anne at Beaupre have just received ample correporation of the permanent nature of certain remarkable cures reported from the shrine some days ago on the occasion of different ptlgrim ages there from Chicago, Montreal, and Ontario. The most wonderful of them all, and one which puzzles medical science, is that of the cure of

The most wonderful of them all, and one which puzzles medical science, is that of the cure of Sister Marie Chapleau of the Hotel Dieu, Montreal, which is officially certified to by Dr. L. D. Mirault, a well-known practitioner and physician at the lost itution.

Sister Marie had suffered for a long time from a malady which deprived her of the use of her left leg, and obliged her to use a partial wooden leg and a crutch. Br. Mirault declared that medical science could do nothing for her. The Sister Superior of the institution persuaded her to visit the shrins of St. Anne and there implore relief. Immediately after kissing the relie of the Virgin Mary's mother she felt completely cured, and got up and walked aione discarding her artificial aids, and depositing them there to swell the pile of cast-asine crutches.

Hundreds of heopide were in the church at the time and witnessed the mirasic. Dr. Mirault certifies that the Sister suffered from chronic inflammation of the periosteum of the left thus, for which all remedies proved usaless, even complete cost for two years. After her return from St. Aftine he again examined her, and found a complete circ. The suddenters of which he has no hesitancy in saying is contrary to the ordinary have of hature.

Very nearly as wonderful was the experience of Mics Mary Thompson of Kingston. 19 years of age, who, as a result of a long attack of muscular rheumalism, suffered so severyly with a spinal trouble, that she was almost unable to move herself at all. After kissing the relie at the sairine she felt the path leave her and got up and walked with ease, professing herself perfectly cured. Mr. Lalonde, the C. P. R. passenger agent, who accompanied the pilgrims, declared that when Miss Thompson b arded the trans, he had difficulty in height her to a seat. It called the two other miraculous cures witnessed by him the same day at St. Anne's, in one of which a dumb boy speake for the first time in years, the other being that of a boy named Coyne, from Finch. Outario, who was an which

NOTES ON SCIENCE AND INDUSTRY. A. A. Vantine & Co. paratus called the formenephone, designed o trace in air the presence of any gas having a different density, will serve an important practical purpose in the detection of the quantity of coal gas in mines. The construction of this



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	6x6,	2.60
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	9x12,	7.60
то ве	10x12,	8.40
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BY SHEAR DETERMINATION.

The Small Texas Stranded in New York Got His Business Start as Newsboy.

Shorty the Barber is the title the newsboys, bootblacks, and other inhabitants of City Hall Park have bestowed upon a brown-faced, healthy-looking little lad of 12. Shorty is a comparative stranger, even in the park where there are so many unknowns. He arrived from Dallas, Tex., one day last week on a cattle train, and when he had the nerve to ask the boss for his pay for attending the cattle, he received a kick and a cuff, and found himself stranded in the netropolis, not knowing where he was going to get his next meal. There was no use in his seeking justice, he argued, as nobody would take his word against the all-powerful cattle boss, who could claim with truth that he had furnished Shorty with a \$2 suit of jeans and had fed him for three weeks because he had to have him to help care for the cattle. Shorty was a sturdy little American lad, and was not disconcerted at the thought that an atom like himself would never be noticed by anybody except the Gerry society. So he just clenched his chubby fists

never be noticed by anybody except the Gerry society. So he just clenched his chubby fish and started out to hustle for his living. Naturally he drifted into City Hall Park, the home of the homeless, and at last, in his explorations, found himself staring through a window in the Register's office at a clerk clipping sheets of paper with a big pair of shears. Out of doors on every side there were little fellows of his own size and size selling papers and blacking boots, but he had not even the limited capital required to launch out in their husiness.

He divided his attention between the Register's clerk and a crowd of hoodiums gathered on the stoop shooting craps. He longed to join the group, and would have enjoyed the excitement of the crap game, but he was penniless, and the capitalistic crap shooters had no use for a rank outsider. He knew full we'l that If he ventured near enough to look on he was bound to be pummelled by some player who had superstitious fears sagainst being hoodoced. Suddenly an idea suggested itself to him as he caught sight of a morthard lad called Gimpy, because he was paralyzed, and Shorty saw the clerk lay down the shears. He walked over to the open window, and in a faltering tone said:

"Hey, mister, lend us yer shears for a few minutes, will yer?"

The clerk turned in surprise at the request and weighed Shorty up from head to foot.

"I just wanted ter make a few cents cuttin's feller's hair," replied Shorty, pointing toward Gimpy.

The clerk looked at Gimpy and an amused

Gimpy.
The clerk looked at Gimpy and an amused expression crept over his face as he said:
All right, here y'are. Now mind, young man, if you attempt to run off with them I'll have you arrested.

expression crept over his face as he said:

"All right, here y'are. Now mind, young man, if you attempt to run off with them I'll have you arreated."

"Thank yer." said Shorty, as if the arrest was part of a bargain.

He took the shears, and, approaching the group, announced:
"Boes any of youse fellers want yer hair cut? 'Cause if you do, I kin do it good, an'It'll only cost yer fi pence apiece."

Shorty cyed Gimpy as he made this announcement, and the lame lad became interested. The crap shooting was suspended for the moment and the players stared at Shorty.

"Holy smoke! will yer git on ter der size of it," said Hed firannigan, no bigger than Shorty himself, but his remark was frowned down by the others.

"Go on, Gimpy, you needs a cut. Git one," said one of the group.

"Well, I'm in th' habit of havin' a shampoo wid me haircut, an' you can't do that, kin yer?"

"Yer bet yer life I kin," said Shorty, and Gimpy was induced to submit to the operation. The other hads crowded around and howled with delight at Shorty's efforts. Gimpy's hair was as thick as tow. It was tangled up into knots and kinks, and Shorty's plot was not an easy one. The shears were not very sharp either, and at every clip Gimpy's head, shorn as it was in terraces, might have been a living picture of the City Hall steps in hair; but he did not mind appearances. He ran his hand over it and seemed satisfied to know that his hair was gone.

"Per trust?" he queried, fishing in his peakers for the City Hall steps in hair; but he did not mind appearances. He ran his hand over it and seemed satisfied to know that his hair was gone.

"Per trust?" he queried, fishing in his peakers for the required nicked.

"Now, said Shorty, clittching the shears in a threatening manner.

"How about der shampon?" asked Gimpy.

"That's all right, but pay fer der hairent."

The crowd chimad in in Shorty's favor and Gimpy had to pay.

"Now, if yer wants a shampso," said Shorty as he posketed the five pennies, "yer kin yo over to der fountain."

Shorty's tonsportal abili

"Ezra," said Mrs. Hilltons to her husband across the breakiast table, "what is it that "Why, I don't know, Elizabeth," said Mr. Billtops. "What is it?"

Billtops. "What is it?"

"The river," said Mrs. Hilltops.
"That's so," said Mrs. Hilltops. "and Just think of it; it never gets tired, either, does it?"

And Mrs. Billtops answered dutfully, "No. Erra, "though really she would have been bets ber pleased if he had made no addition to her little joke. She didn't make lokes very often, and when she did make one she liked to have it left to shine without being lefosged by comment or extinguished by superior brilliancy.